

US Army Alaska

**Integrated
Natural
Resources
Management
Plan**

2002 - 2006

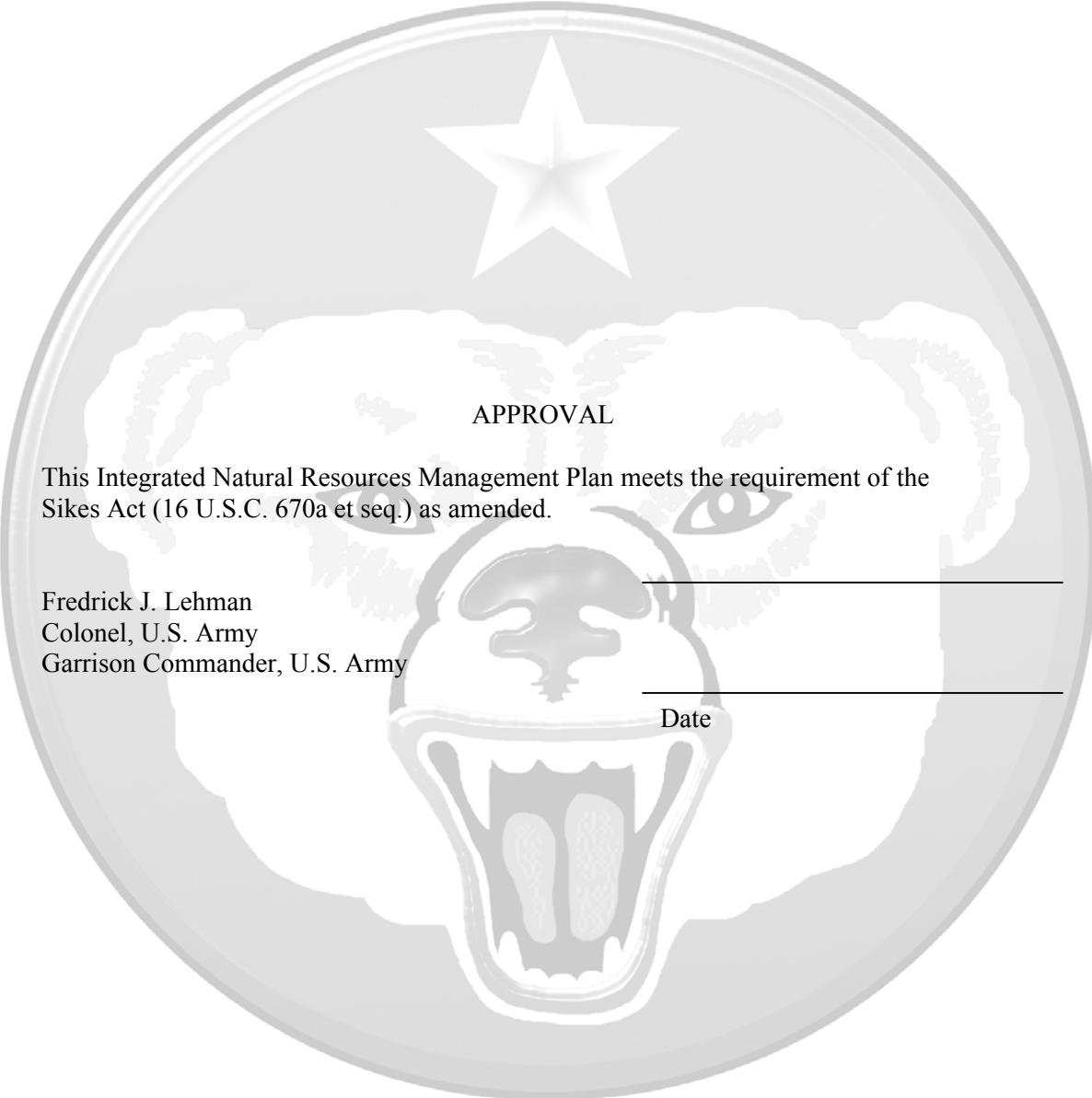
Volume 2 Fort Richardson

**Draft Final
25 June 2001**

*This Integrated Natural Resources Management Plan
is dedicated to the memory of
Laurie Angell*

INTEGRATED NATURAL RESOURCES
MANAGEMENT PLAN
2002-2006

U.S. ARMY ALASKA
VOLUME 2 – FORT RICHARDSON



INTEGRATED NATURAL RESOURCES
MANAGEMENT PLAN
2002-2006

US ARMY ALASKA
VOLUME 2 – FORT RICHARDSON

PREPARED BY

Natural Resources Branch
US Army Alaska
Fort Richardson, Alaska 99505-6500

FORT RICHARDSON/USARAK REVIEW

William A. Gossweiler, Chief, Natural Resources Branch
Gary W. Larsen, Deputy Chief, Natural Resources
Dr. Charles T. Schick, Fort Richardson ITAM/Conservation Coordinator
Douglas Johnson, Chief, Environmental Resources Department

Director, Public Works
ATTN: APVR-RPW-EV
Fort Richardson, AK 99505-6500

Director, Plans, Training, Security, and Mobilization
ATTN: APVR-RPTM
Fort Richardson, AK 99505-6500

MAJOR COMMAND REVIEW

Lawrence Hirai - Environmental Protection Specialist
Headquarters, US Army, Pacific
ATTN: APEN-E
Fort Shafter, HI 96858-5100

PREFACE

"We do not own this land; we are caretakers of the land and the plant and animal species that inhabit it. The American people entrust the land to our care, and we shall fulfill their trust. We shall conserve and protect these resources for the future."¹

At the turn of the 19th century, French scientist J.B. LaMark cautioned that man is destined to extinction by destroying his environment. Two hundred years later, little has been done to preserve our environment, while much has been done to deplete it. As we stand on the threshold of a new century, it is clear that the steps we take today to protect our natural resources will be our legacy to generations in the 21st century and beyond. From a military standpoint, the way we manage our lands will, in part, affect the nation's future defense posture.

In this age of environmental awareness, management of our nation's natural resources must be based on a sound approach and dedicated programs. Crucial to the success of this endeavor is a true, unfaltering commitment from commanders, soldiers, trainers, natural resource personnel, and engineers.

The Department of Defense (DOD) is steward of about 25 million acres of land in the United States, harboring many irreplaceable natural and cultural resources. As our nation continues to grow and develop, these military lands become important as last strongholds for much of our country's dwindling natural resources.

US Army Alaska (USARAK) is custodian for nearly two million acres of predominately undeveloped land on which to carry out its mission. With two large posts in Alaska's interior and a smaller one in the southcentral region, USARAK enjoys a full representation of the unique natural resources and environmental conditions that Alaska has to offer. It is this that makes USARAK's "Northern Warrior" a special kind of soldier who lives and trains in one of the most rugged and beautiful places left on earth.

Nestled below the massive peaks of the Chugach Range, Fort Richardson, Headquarters US Army Alaska, together with neighboring Chugach State Park, gives Anchorage all the charisma and charm of a city poised on the edge of wilderness. The military lands encompass countless lakes and ponds, coastline, vast forested areas, and tundra-covered mountain slopes. They harbor a variety of wildlife including moose, Dall sheep, wolves, brown and black bears, wolverines, lynx, coyote, otters, beavers, bald eagles, trumpeter swans, and a myriad of lesser known species. These natural treasures are contained within a 61,000 acre continuum of ecosystems, making a dramatic transition from the marine environment of Upper Cook Inlet to the spartan alpine peaks of the Chugach Mountains in a distance of less than eight miles. This unique responsibility and opportunity is found nowhere else on lands owned or used by the Department of Defense.

Those who live and train on Fort Richardson well understand and appreciate both the intrinsic and practical value of these lands and their natural resources. The fact that they still exist at all in a relatively natural state is a credit to the Army. Immediately outside the post, land development occurs feverishly whenever and wherever it can and repeated attempts are made to secure either ownership or long-term use of Fort Richardson's valuable training lands for non-training uses. Past losses of training lands and natural resources for uses not supporting the training mission have placed the post in a state of operational concern. Any future losses seriously threaten its military viability.

¹ Robert M. Walker, Assistant Secretary of the Army Testimony before Congress, July 11, 1995

This concern dictates the current policy that any long-term use of Fort Richardson's lands and natural resources that is not clearly in the best interests of the military mission and/or the environment is generally unacceptable. Under Army stewardship, the land and natural resources have been improved and preserved over the years, and the Army intends to continue to preserve them. The condition of these lands is crucial to the military mission, the well-being of the community, and the overall health of the nation's environment.

This Integrated Natural Resources Management Plan is USARAK's authoritative guide for the care and wise use of lands entrusted to the US Army, as endorsed by the Commanding General and other signatory agencies. The plan covers a five-year period, but the philosophy behind it will be used for a much longer period of time. USARAK is committed to using an ecosystem management approach to its natural resources program. This approach helps protect biological diversity and facilitates sound decisions regarding the wise use of renewable natural resources to support the needs of the military mission in the region.

Abundant and diverse natural resources, and a healthy environment for promoting premier training grounds . . . now and forever . . . is the commitment of U.S. Army Alaska.

TABLE OF CONTENTS

PREFACE	V
TABLE OF CONTENTS	VII
LIST OF FIGURES.....	XII
LIST OF TABLES.....	XIII
ACRONYMS.....	XV
EXECUTIVE SUMMARY	ERROR! BOOKMARK NOT DEFINED.
CHAPTER 1. INTRODUCTION.....	ERROR! BOOKMARK NOT DEFINED.
1.1 GOALS AND POLICIES.....	ERROR! BOOKMARK NOT DEFINED.
1.1.1 <i>Goals</i>	<i>Error! Bookmark not defined.</i>
1.1.2 <i>Intermediate Steps</i>	<i>Error! Bookmark not defined.</i>
1.1.3 <i>Fort Richardson's Land and Natural Resources Management Policy</i>	<i>Error! Bookmark not defined.</i>
1.2 THE PLAN	ERROR! BOOKMARK NOT DEFINED.
1.2.1 <i>Purpose of the Plan</i>	<i>Error! Bookmark not defined.</i>
1.2.2 <i>Scope of the Plan</i>	<i>Error! Bookmark not defined.</i>
1.2.3 <i>Structure of the Plan</i>	<i>Error! Bookmark not defined.</i>
1.2.4 <i>Bureau of Land Management Planning</i>	<i>Error! Bookmark not defined.</i>
1.2.5 <i>Section 106, National Historic Preservation Act (NHPA)</i>	<i>Error! Bookmark not defined.</i>
1.3 BACKGROUND.....	ERROR! BOOKMARK NOT DEFINED.
1.3.1 <i>Location and Neighbors</i>	<i>Error! Bookmark not defined.</i>
1.3.2 <i>Acreage, Acquisition, and Land Status</i>	<i>Error! Bookmark not defined.</i>
1.3.3 <i>Installation History</i>	<i>Error! Bookmark not defined.</i>
1.3.4 <i>Historic Natural Resources Program Development</i>	<i>Error! Bookmark not defined.</i>
1.4 MILITARY MISSION	ERROR! BOOKMARK NOT DEFINED.
1.4.1 <i>Overview</i>	<i>Error! Bookmark not defined.</i>
1.4.2 <i>Relationships Between Natural Resources and the Military Mission</i>	<i>Error! Bookmark not defined.</i>
1.4.3 <i>Future Military Mission Impacts on Natural Resources</i>	<i>Error! Bookmark not defined.</i>
1.5 JOINT MANAGEMENT AND STEWARDSHIP	ERROR! BOOKMARK NOT DEFINED.
1.6 RESPONSIBILITIES	ERROR! BOOKMARK NOT DEFINED.
1.7 PARTNERSHIPS	ERROR! BOOKMARK NOT DEFINED.
1.7.1 <i>Federal Agencies</i>	<i>Error! Bookmark not defined.</i>
1.7.2 <i>State Agencies</i>	<i>Error! Bookmark not defined.</i>
1.7.3 <i>Municipality of Anchorage</i>	<i>Error! Bookmark not defined.</i>
1.7.4 <i>Other Partners</i>	<i>Error! Bookmark not defined.</i>
1.8 NATIONAL ENVIRONMENTAL POLICY ACT COMPLIANCE AND INTEGRATION	ERROR! BOOKMARK NOT DEFINED.
1.8.1 <i>National Environmental Policy Act (NEPA) of 1969</i>	<i>Error! Bookmark not defined.</i>
1.8.2 <i>Army Regulations 200-2 and 200-3</i>	<i>Error! Bookmark not defined.</i>
1.8.3 <i>INRMP and NEPA Integration</i>	<i>Error! Bookmark not defined.</i>
1.8.4 <i>Purpose of and Need for the Proposed Action</i>	<i>Error! Bookmark not defined.</i>
1.8.5 <i>Description of the Proposed Action and Alternatives</i>	<i>Error! Bookmark not defined.</i>
1.8.6 <i>Scope of Analysis</i>	<i>Error! Bookmark not defined.</i>
1.8.7 <i>Interagency Coordination and Review</i>	<i>Error! Bookmark not defined.</i>
CHAPTER 2. AFFECTED ENVIRONMENT.....	ERROR! BOOKMARK NOT DEFINED.
2.1 FACILITIES	ERROR! BOOKMARK NOT DEFINED.

2.1.1 Range Facilities	Error! Bookmark not defined.
2.1.2 Transportation System	Error! Bookmark not defined.
2.1.3 Water Supply.....	Error! Bookmark not defined.
2.1.4 Projected Changes in Facilities.....	Error! Bookmark not defined.
2.2 PHYSICAL RESOURCES.....	ERROR! BOOKMARK NOT DEFINED.
2.2.1 Topography.....	Error! Bookmark not defined.
2.2.2 Geology.....	Error! Bookmark not defined.
2.2.3 Soils.....	Error! Bookmark not defined.
2.2.4 Water Resources	Error! Bookmark not defined.
2.2.5 Climate.....	Error! Bookmark not defined.
2.3 BIOLOGICAL RESOURCES	ERROR! BOOKMARK NOT DEFINED.
2.3.1 Biodiversity	Error! Bookmark not defined.
2.3.2 Flora	Error! Bookmark not defined.
2.3.3 Fauna.....	Error! Bookmark not defined.
2.3.4 Special Interest Management Areas.....	Error! Bookmark not defined.
2.4 CULTURAL RESOURCES.....	ERROR! BOOKMARK NOT DEFINED.

CHAPTER 3. ECOSYSTEM MANAGEMENT..... ERROR! BOOKMARK NOT DEFINED.

3.1 ECOSYSTEM MANAGEMENT GOALS	ERROR! BOOKMARK NOT DEFINED.
3.2 ECOSYSTEM MANAGEMENT PLANNING	ERROR! BOOKMARK NOT DEFINED.
3.2.1 Ecosystem Management Plan	Error! Bookmark not defined.
3.2.2 Aerial Monitoring Plan for Ecosystem Management.....	Error! Bookmark not defined.
3.3 INVENTORY AND MONITORING FOR ECOSYSTEM MANAGEMENT.....	ERROR! BOOKMARK NOT DEFINED.
3.4 ECOSYSTEM MANAGEMENT PROGRAM	ERROR! BOOKMARK NOT DEFINED.
3.4.1 Maintenance of Ecosystem Integrity	Error! Bookmark not defined.
3.4.2 Ecosystem Managment Program Procedures	Error! Bookmark not defined.
3.4.3 Ecosystem Users	Error! Bookmark not defined.
3.4.4 Land-Use.....	Error! Bookmark not defined.
3.4.5 Public Access, Encroachment, and Trespass	Error! Bookmark not defined.
3.4.6 Fort Richardson as Part of a Ecoregional Mapping Effort	Error! Bookmark not defined.
3.4.7 Land Management Units.....	Error! Bookmark not defined.
3.5 ECOSYSTEM MANAGEMENT ALTERNATIVES.....	ERROR! BOOKMARK NOT DEFINED.
3.5.1 Current Management.....	Error! Bookmark not defined.
3.5.2 Proposed Management	Error! Bookmark not defined.
3.6 ECOSYSTEM MANAGEMENT RESPONSIBILITIES.....	ERROR! BOOKMARK NOT DEFINED.

CHAPTER 4. PHYSICAL RESOURCES AND VEGETATION MANAGEMENT ERROR! BOOKMARK NOT DEFINED.

4.1 INTEGRATED TRAINING AREA MANAGEMENT (ITAM).....	ERROR! BOOKMARK NOT DEFINED.
4.1.1 ITAM Goals.....	Error! Bookmark not defined.
4.1.2 ITAM Planning - Training Requirements Integration (TRI)	Error! Bookmark not defined.
4.1.3 ITAM Monitoring (Land Condition-Trend Analysis)	Error! Bookmark not defined.
4.1.4 Land Rehabilitation and Maintenance (LRAM).....	Error! Bookmark not defined.
4.1.5 Environmental Awareness (EA)	Error! Bookmark not defined.
4.1.5 ITAM Responsibilities	Error! Bookmark not defined.
4.2 WATERSHED MANAGEMENT	ERROR! BOOKMARK NOT DEFINED.
4.2.1 Watershed Management Goals	Error! Bookmark not defined.
4.2.2 Watershed Management Planning	Error! Bookmark not defined.
4.2.3 Watershed Inventory and Monitoring	Error! Bookmark not defined.
4.2.4 Watershed Management.....	Error! Bookmark not defined.
4.2.5 Watershed Management Responsibilities	Error! Bookmark not defined.
4.3 MINERALS MANAGEMENT	ERROR! BOOKMARK NOT DEFINED.
4.3.1 Minerals Management Program Goals	Error! Bookmark not defined.
4.3.2 Minerals Management Program Description	Error! Bookmark not defined.
4.3.3 Minerals Management Program Responsibilities.....	Error! Bookmark not defined.

CHAPTER 5. BIOLOGICAL RESOURCES MANAGEMENTERROR! BOOKMARK NOT DEFINED.

5.1 WETLANDS MANAGEMENT .....	.....	ERROR! BOOKMARK NOT DEFINED.
5.1.1 <i>Wetlands Management Program Goals</i>.....	.....	<i>Error! Bookmark not defined.</i>
5.1.2 <i>Wetlands Management Plan</i>.....	.....	<i>Error! Bookmark not defined.</i>
5.1.3 <i>Wetlands Inventory and Monitoring</i>.....	.....	<i>Error! Bookmark not defined.</i>
5.1.4 <i>Wetlands Management</i>.....	.....	<i>Error! Bookmark not defined.</i>
5.1.5 <i>Wetlands Management Responsibilities</i>.....	.....	<i>Error! Bookmark not defined.</i>
5.2 FOREST MANAGEMENT .....	.....	ERROR! BOOKMARK NOT DEFINED.
5.2.1 <i>Forestry Program Goals</i>.....	.....	<i>Error! Bookmark not defined.</i>
5.2.2 <i>Forest Management Plan</i>.....	.....	<i>Error! Bookmark not defined.</i>
5.2.3 <i>Forest Inventory</i>.....	.....	<i>Error! Bookmark not defined.</i>
5.2.4 <i>Forest Management</i>.....	.....	<i>Error! Bookmark not defined.</i>
5.2.5 <i>Forestry Responsibilities</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.3 FIRE MANAGEMENT .....	.....	ERROR! BOOKMARK NOT DEFINED.
5.3.1 <i>Fire Management Goals</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.3.2 <i>Fire Management Plan</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.3.3 <i>Fire and Fuels Inventory</i>.....	.....	<i>Error! Bookmark not defined.</i>
5.3.4 <i>Fire Management</i>.....	.....	<i>Error! Bookmark not defined.</i>
5.3.5 <i>Fire Management Responsibilities</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.4 FISH AND WILDLIFE MANAGEMENT .....	.....	ERROR! BOOKMARK NOT DEFINED.
5.4.1 <i>Fish and Wildlife Management Goals</i>.....	.....	<i>Error! Bookmark not defined.</i>
5.4.2 <i>Habitat Management Plan</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.4.3 <i>Fish and Wildlife Inventory and Monitoring</i>.....	.....	<i>Error! Bookmark not defined.</i>
5.4.4 <i>Fish and Wildlife Management</i>.....	.....	<i>Error! Bookmark not defined.</i>
5.4.5 <i>Fish and Wildlife Management Responsibilities</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.5 ENDANGERED SPECIES MANAGEMENT .....	.....	ERROR! BOOKMARK NOT DEFINED.
5.5.1 <i>Endangered Species Management Goals</i>.....	.....	<i>Error! Bookmark not defined.</i>
5.5.2 <i>Endangered Species Planning</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.5.3 <i>Endangered Species Inventory and Monitoring</i>.....	.....	<i>Error! Bookmark not defined.</i>
5.5.4 <i>Endangered Species Management</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.5.5 <i>Endangered Species Program Responsibilities</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.6 SPECIAL INTEREST AREAS MANAGEMENT .....	.....	ERROR! BOOKMARK NOT DEFINED.
5.6.1 <i>Special Interest Areas Goals</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.6.2 <i>Special Interest Areas Management Plan</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.6.3 <i>Special Interest Areas Inventory and Monitoring</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.6.4 <i>Special Interest Area Management</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.6.5 <i>Special Interest Area Responsibilities</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.7 PEST MANAGEMENT .....	.....	ERROR! BOOKMARK NOT DEFINED.
5.7.1 <i>Pest Management Goals</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.7.2 <i>Pest Management Plan</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.7.3 <i>Pest Inventory and Monitoring</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.7.4 <i>Pest Management</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.7.5 <i>Pest Management Program Responsibilities</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.8 URBAN AREA MANAGEMENT .....	.....	ERROR! BOOKMARK NOT DEFINED.
5.8.1 <i>Urban Area Management Goals</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.8.2 <i>Urban Area Planning</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.8.3 <i>Urban Area Monitoring</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.8.4 <i>Urban Area Vegetation Management</i> .....	.....	<i>Error! Bookmark not defined.</i>
5.8.5 <i>Urban Area Management Responsibilities</i> .....	.....	<i>Error! Bookmark not defined.</i>

CHAPTER 6. MANAGEMENT OF HUMAN ACTIVITIESERROR! BOOKMARK NOT DEFINED.

6.1 EDUCATION, AWARENESS, AND PUBLIC OUTREACH .....	.....	ERROR! BOOKMARK NOT DEFINED.
6.1.1 <i>Education, Awareness, and Public Outreach Goals</i> .....	.....	<i>Error! Bookmark not defined.</i>
6.1.2 <i>Education, Awareness, and Public Outreach Management Plan</i> .....	.....	<i>Error! Bookmark not defined.</i>
6.1.3 <i>Education, Awareness, and Public Outreach Survey</i> .....	.....	<i>Error! Bookmark not defined.</i>

6.1.4 Education, Awareness, and Public Outreach Management.....	Error! Bookmark not defined.
6.1.5 Education and Public Outreach Responsibilities.....	Error! Bookmark not defined.
6.2 OUTDOOR RECREATION	ERROR! BOOKMARK NOT DEFINED.
6.2.1 Outdoor Recreation Program Goals.....	Error! Bookmark not defined.
6.2.2 Outdoor Recreation Program Management Plan.....	Error! Bookmark not defined.
6.2.3 Outdoor Recreation Monitoring	Error! Bookmark not defined.
6.2.4 Outdoor Recreation Management.....	Error! Bookmark not defined.
6.2.5 Outdoor Recreation Program Responsibilities.....	Error! Bookmark not defined.
6.3 CONSERVATION ENFORCEMENT.....	ERROR! BOOKMARK NOT DEFINED.
6.3.1 Conservation Enforcement Goals	Error! Bookmark not defined.
6.3.2 Conservation Enforcement Management Plan	Error! Bookmark not defined.
6.3.3 Conservation Enforcement Surveillance.....	Error! Bookmark not defined.
6.3.4 Conservation Enforcement.....	Error! Bookmark not defined.
6.3.5 Conservation Enforcement Responsibilities.....	Error! Bookmark not defined.
6.4 CULTURAL RESOURCES MANAGEMENT	ERROR! BOOKMARK NOT DEFINED.
6.4.1 Cultural Resource Program Goals	Error! Bookmark not defined.
6.4.2 Cultural Resource Planning.....	Error! Bookmark not defined.
6.4.3 Cultural Resources Inventory and Monitoring	Error! Bookmark not defined.
6.4.4 Cultural Resource Management	Error! Bookmark not defined.
6.4.5 Cultural Resource Management Responsibilities	Error! Bookmark not defined.

CHAPTER 7. MANAGEMENT SUPPORT SERVICESERROR! BOOKMARK NOT DEFINED.

7.1 NEPA	ERROR! BOOKMARK NOT DEFINED.
7.1.1 NEPA Program Goals.....	Error! Bookmark not defined.
7.1.2 NEPA Program Description	Error! Bookmark not defined.
7.1.3 NEPA Program Responsibilities.....	Error! Bookmark not defined.
7.2 DECISION-SUPPORT SYSTEMS (GIS, RFMSS, IFS).....	ERROR! BOOKMARK NOT DEFINED.
7.2.1 Decision-Support Systems Goals	Error! Bookmark not defined.
7.2.2 Decision-Support Systems Program Planning.....	Error! Bookmark not defined.
7.2.3 Decision-Support Systems Maintenance	Error! Bookmark not defined.
7.2.4 Decision-Support Systems Management	Error! Bookmark not defined.
7.2.5 Decision-Support Systems Responsibilities.....	Error! Bookmark not defined.
7.3 OTHER PROGRAMS AFFECTING NATURAL RESOURCE MANAGEMENT	ERROR! BOOKMARK NOT DEFINED.
7.3.1 Real Property and Master Planning (RPMP)	Error! Bookmark not defined.
7.3.2 RANGE AND TRAINING LAND PROGRAM (RTLP).....	ERROR! BOOKMARK NOT DEFINED.

CHAPTER 8. NATURAL RESOURCES MANAGEMENT IMPLEMENTATION.....ERROR! BOOKMARK NOT DEFINED.

8.1 NATURAL RESOURCES MANAGEMENT IMPLEMENTATION GOALS	ERROR! BOOKMARK NOT DEFINED.
8.2 CONSERVATION PROGRAM IMPLEMENTATION	ERROR! BOOKMARK NOT DEFINED.
8.2.1 Conservation Program Implementation Plan	Error! Bookmark not defined.
8.2.2 Conservation Program Management	Error! Bookmark not defined.
8.3 PROJECT MANAGEMENT PLANNING AND REPORTING	ERROR! BOOKMARK NOT DEFINED.
8.3.1 Integrated Natural Resource Management Plan	Error! Bookmark not defined.
8.3.2 Management Action Plans	Error! Bookmark not defined.
8.3.3 Conservation and ITAM Workplans.....	Error! Bookmark not defined.
8.3.4 Environmental Program Requirement (EPR)	Error! Bookmark not defined.
8.3.5 Environmental Quality Report.....	Error! Bookmark not defined.
8.3.6 Installation Status Report	Error! Bookmark not defined.
8.4 STAFFING	ERROR! BOOKMARK NOT DEFINED.
8.5 PROGRAM MANAGEMENT MECHANISMS	ERROR! BOOKMARK NOT DEFINED.
8.5.1 Partnering and Obligation Mechanisms.....	Error! Bookmark not defined.
8.5.2 Conservation Web Page.....	Error! Bookmark not defined.
8.5.3 Conservation Newsletter.....	Error! Bookmark not defined.
8.5.4 In-Progress Review (IPR)	Error! Bookmark not defined.
8.5.5 Conservation Team	Error! Bookmark not defined.

8.6 PROJECT PRIORITIES AND FUNDING	ERROR! BOOKMARK NOT DEFINED.
8.6.1 <i>Project/Program Priorities</i>	<i>Error! Bookmark not defined.</i>
8.6.2 <i>Funding</i>	<i>Error! Bookmark not defined.</i>
8.6.3 <i>INRMP Implementation Costs</i>	<i>Error! Bookmark not defined.</i>
8.7 COMMAND SUPPORT	ERROR! BOOKMARK NOT DEFINED.

CHAPTER 9. ENVIRONMENTAL CONSEQUENCES OF IMPLEMENTATIONERROR! BOOKMARK NOT DEFINED.

9.1 No ACTION/CURRENT MANAGEMENT ALTERNATIVE	ERROR! BOOKMARK NOT DEFINED.
9.2 PROPOSED ACTION ALTERNATIVE (PREFERRED ALTERNATIVE)	ERROR! BOOKMARK NOT DEFINED.
9.3 CUMULATIVE EFFECTS.....	ERROR! BOOKMARK NOT DEFINED.
9.4 FINDINGS AND CONCLUSIONS	ERROR! BOOKMARK NOT DEFINED.

PERSONS CONTACTEDERROR! BOOKMARK NOT DEFINED.

APPENDICES.....ERROR! BOOKMARK NOT DEFINED.

LIST OF FIGURES

Figure 1-1. General Location of Fort Richardson.....	Error! Bookmark not defined.
Figure 1-2. Fort Richardson Land Acquisition.....	Error! Bookmark not defined.
Figure 2-1. Fort Richardson Facilities.....	Error! Bookmark not defined.
Figure 2-2. Fort Richardson Transportation System.....	Error! Bookmark not defined.
Figure 2-3. Fort Richardson Terrain.....	Error! Bookmark not defined.
Figure 2-4. Fort Richardson Surface Geology.....	Error! Bookmark not defined.
Figure 2-5. Fort Richardson Soils.....	Error! Bookmark not defined.
Figure 2-6. Fort Richardson Surface Waters.....	Error! Bookmark not defined.
Figure 2-7. Fort Richardson Vegetation.....	Error! Bookmark not defined.
Figure 2-8. Fort Richardson Wetlands.....	Error! Bookmark not defined.
Figure 2-9. Fort Richardson Wildlife Habitat.....	Error! Bookmark not defined.
Figure 2-10. Fort Richardson Moose Habitat.....	Error! Bookmark not defined.
Figure 2-11. Fort Richardson Special Interest Areas.....	Error! Bookmark not defined.
Figure 3-1. Fort Richardson Military Land Use.....	Error! Bookmark not defined.
Figure 3-2. Fort Richardson Training Areas.....	Error! Bookmark not defined.
Figure 3-3. Fort Richardson Ecosystem Management Units.....	Error! Bookmark not defined.
Figure 3-4. Fort Richardson Public Access.....	Error! Bookmark not defined.
Figure 4-1. Erosion Control/LRAM Management Areas.....	Error! Bookmark not defined.
Figure 5-1. Environmental Limitations Overlay.....	Error! Bookmark not defined.
Figure 5-2. Forest Management Areas.....	Error! Bookmark not defined.
Figure 5-3. Fort Richardson Fire History.....	Error! Bookmark not defined.
Figure 5-4. Fire Management Areas.....	Error! Bookmark not defined.
Figure 5-5. Fisheries Management Areas.....	Error! Bookmark not defined.
Figure 5-6. ADF&G Game Management Units.....	Error! Bookmark not defined.
Figure 5-7. Habitat Management Areas.....	Error! Bookmark not defined.
Figure 6-1. Outdoor Recreation Management Areas.....	Error! Bookmark not defined.

LIST OF TABLES

Table 1-1. Location of NEPA Analysis Sections within the INRMP	Error! Bookmark not defined.
Table 2-1. Average Temperatures (Degrees Fahrenheit) by Month, March 1941-December 1991 for the Fort Richardson Area (Elmendorf AFB, 1994).	Error! Bookmark not defined.
Table 2-2. Annual Moose Population, 1986 - 1996.*	Error! Bookmark not defined.
Table 3-1. Ecosystem Management Plan.....	Error! Bookmark not defined.
Table 3-2. Aerial Monitoring Plan for Ecosystem Management.....	Error! Bookmark not defined.
Table 3-3. Military Land-Use.....	Error! Bookmark not defined.
Table 3-4. Proposed Management Projects.....	Error! Bookmark not defined.
Table 4-1. Training Requirements Integration Program.....	Error! Bookmark not defined.
Table 4-2. LCTA Monitoring Areas.....	Error! Bookmark not defined.
Table 4-3. Land Condition-Trend Analysis Program.....	Error! Bookmark not defined.
Table 4-4. Land Rehabilitation and Maintenance.....	Error! Bookmark not defined.
Table 4-5. Environmental Awareness.....	Error! Bookmark not defined.
Table 4-6. Soil Resources Management Plan.....	Error! Bookmark not defined.
Table 4-7. Soil and Water Quality Management Plan.....	Error! Bookmark not defined.
Table 4-8. Soil and Water Quality Monitoring Program.....	Error! Bookmark not defined.
Table 4-9. Planning-Level Soil Survey.....	Error! Bookmark not defined.
Table 4-10. Planning-Level Floristic Inventory.....	Error! Bookmark not defined.
Table 4-11. Planning-Level Vegetation Survey.....	Error! Bookmark not defined.
Table 4-12. Planning-Level Topography Survey.....	Error! Bookmark not defined.
Table 4-13. Planning-Level Surface Water Survey.....	Error! Bookmark not defined.
Table 4-14. Soil and Water Quality Management.....	Error! Bookmark not defined.
Table 4-15. Erosion Control and Streambank Stabilization Projects.....	Error! Bookmark not defined.
Table 5-1. Wetlands Management Action Plan.....	Error! Bookmark not defined.
Table 5-2. Wetlands Monitoring.....	Error! Bookmark not defined.
Table 5-3. Planning-Level Wetlands Inventory.....	Error! Bookmark not defined.
Table 5-4. Environmental Limitations Overlay, Summer Land-Use Category Definitions.	Error! Bookmark not defined.
Table 5-5. Environmental Limitations Overlay, Winter Land-Use Category Definitions.....	Error! Bookmark not defined.
Table 5-6. Wetlands Management Projects.	Error! Bookmark not defined.
Table 5-7. Forest Management Action Plan.	Error! Bookmark not defined.
Table 5-8. Forest Inventory.....	Error! Bookmark not defined.
Table 5-9. Forest Management Areas.	Error! Bookmark not defined.
Table 5-10. Forest Management Projects.	Error! Bookmark not defined.
Table 5-11. Fire Management Action Plan.	Error! Bookmark not defined.
Table 5-12. Fire and Fuels Inventory.....	Error! Bookmark not defined.
Table 5-13. Fire Management Projects.	Error! Bookmark not defined.
Table 5-14. Habitat Management Action Plan.	Error! Bookmark not defined.
Table 5-15. Fish and Wildlife Monitoring.....	Error! Bookmark not defined.
Table 5-16. Planning-Level Fauna Surveys.....	Error! Bookmark not defined.
Table 5-17. Fish and Wildlife Population Management.	Error! Bookmark not defined.
Table 5-18. Habitat Management Areas.	Error! Bookmark not defined.
Table 5-19. Habitat Management Actions.	Error! Bookmark not defined.
Table 5-20. Endangered Species Management.	Error! Bookmark not defined.
Table 5-21. Special Interest Areas Management Action Plan.	Error! Bookmark not defined.
Table 5-22. Special Interest Areas Management.	Error! Bookmark not defined.
Table 5-23. Installation Pest Management Plan.....	Error! Bookmark not defined.

Table 5-24. Urban Area Vegetation Management.....	Error! Bookmark not defined.
Table 6-1. Education, Awareness, and Public Outreach Management Action Plan.	Error! Bookmark not defined.
Table 6-1. Education, Awareness, and Public Outreach Management	Error! Bookmark not defined.
Table 6-2. Outdoor Recreation Management Action Plan.....	Error! Bookmark not defined.
Table 6-3. Outdoor Recreation Monitoring.....	Error! Bookmark not defined.
Table 6-4. Outdoor Recreation Management.....	Error! Bookmark not defined.
Table 6-6. Conservation Enforcement Management Action Plan.....	Error! Bookmark not defined.
Table 6-5. Conservation Enforcement Management	Error! Bookmark not defined.
Table 7-1. Geographic Information Systems Management.....	Error! Bookmark not defined.
Table 8-1. Conservation Program Management	Error! Bookmark not defined.
Table 8-2. Integrated Natural Resource Management Plan.....	Error! Bookmark not defined.
Table 8-3. Positions needed at Fort Richardson to implement the INRMP.	Error! Bookmark not defined.
Table 8-4. Fort Richardson Project Priorities for 2002-2006	Error! Bookmark not defined.
Table 8-5. Forestry Reserve Account Funding Requirements 2002-2006.	Error! Bookmark not defined.
Table 8-6. Agricultural Outlease Account Funding Requirements 2002-2006.	Error! Bookmark not defined.
Table 8-7. Environmental Program Requirements.....	Error! Bookmark not defined.
Table 8-8. ITAM Funding Requirements during 2002-2006.....	Error! Bookmark not defined.
Table 9-1. Impacts of No Action/Current Management Natural Resources Management on the Environment.....	Error! Bookmark not defined.
Table 9-2. Impacts of Proposed Natural Resources Management on the Environment..	Error! Bookmark not defined.

ACRONYMS

ABO	Alaska Bird Observatory
ABR	ABR, Inc., Environmental Research and Services
ACC	Alaska Administrative Code
ADC	Animal Damage Control
ADEC	Alaska Department of Environmental Conservation
ADF&G	Alaska Department of Fish and Game
ADNR	Alaska Department of Natural Resources
AEC	Army Environmental Center
AFB	Air Force Base
AFS	Alaska Fire Service
AFTAC	Air Force Technical Applications Center
ALCOM	Alaska Command
ALMAT	Army Land Management Advisory Team
AMT	Alaska Meteorological Team
ANILCA	Alaska National Interest Lands Conservation Act
AR	Army Regulation
ARPA	Archeological Resources Protection Act
ARTEP	Army Training and Evaluation Program
ATTACC	Army Training and Testing Area Carrying Capacity
ATV	All Terrain Vehicle
AWSS	Area Weapons Scoring System
BASH	Bird Air Strike Hazard
BBS	Breeding Bird Survey
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BRAC	Base Realignment and Closure
CALFEX	Combined Arms Live-Fire Exercise
CEMML	Center for Environmental Management of Military Lands
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFI	Continuous Forest Inventory
CFR	Code of Federal Regulations
COE	Corps of Engineers
CRM	Cultural Resources Manager
CRREL	Cold Regions Research and Engineering Laboratory
CRTC	Cold Regions Test Center
CSU	Colorado State University
CWA	Clean Water Act
DA	Department of the Army
DAMO-TR	Directorate of Training
dbh	diameter breast height
DOD	Department of Defense

DOI	Department of Interior
DPCA	Directorate of Personnel and Community Activities
DPTSM	Directorate of Plans, Training, Security and Mobilization
DPW	Directorate of Public Works
DZ	Drop Zone
EA	Environmental Assessment
EA	Environmental Awareness
EBS	Environmental Baseline Survey
EIS	Environmental Impact Statement
ELS	Ecological Land Survey
EO	Executive Order
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Agency
EPR	Environmental Program Requirements
ERD	Environmental Resource Division
FGDC	Federal Geographic Data Committee
FLPMA	Federal Land Policy and Management Act
FNSB	Fairbanks North Star Borough
FNSI	Finding of No Significant Impact
FY	Fiscal Year
GIS	Geographic Information Systems
GMU	Game Management Unit
gpm	gallons per minute
GPS	Global Positioning System
GRTS	Gerstle River Test Site
GVEA	Golden Valley Electric Association
HQDA	Headquarters, Department of the Army
ICRMP	Integrated Cultural Resources Management Plan
ICUZ	Incompatible Use Zones
IISC	ITAM Installation Steering Committee
INRMP	Integrated Natural Resources Management Plan
IPA	Intergovernmental Personnel Act
IPMP	Installation Pest Management Plan
IRP	Installation Restoration Plan
ISR	Installation Status Report
ITAM	Integrated Training Area Management
ITC	Installation Training Capacity
LCTA	Land Condition-Trend Analysis
LEIS	Legislative Environmental Impact Statement
LRAM	Land Rehabilitation and Management
LTA	Local Training Area
MACOM	Major Command
MAPS	Measuring Avian Productivity and Survival
MFE	Major Flying Exercise

MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MOUT	Military Operations in Urban Terrain
mph	miles per hour
MPRC	Multi-Purpose Range Complex
MRE	Meals Ready to Eat
MSR	Main Supply Route
NBC	Nuclear, Biological, and Chemical
NCO	Non-Commissioned Officer
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NOV	Notice of Violation
NRCS	Natural Resource Conservation Service
NWI	National Wetlands Inventory
NWTC	Northern Warfare Training Center
O&M	Operation and Maintenance
OACSIM-ODEP	Office of the Assistant Chief of Staff for Installation Management-Office of the Directorate of Environmental Programs
OAS	Office of Aircraft Services
ODCSOPS	Office of the Deputy Chief of Staff, Operations and Plans
ORISE	Oak Ridge Institute of Science and Education
ORV	Off-Road (Recreational) Vehicle
PL	Public Law
PLO	Public Land Order
PMC	Plant Material Center
PMO	Provost Marshals Office
POL	Petroleum, Oil, and Lubricants
PSWCD	Palmer Soil and Water Conservation District
RAB	Restoration Advisory Board
REC	Record of Environmental Consideration
RETS	Remote Electronic Target Sensing
RFMSS	Range Facilities Management Support System
RMP	Resource Management Plan
ROD	Record of Decision
RTLP	Range and Training Land Program
SAIA	Sikes Act Improvement Act
SHPO	State Historic Preservation Office
SMOTE	Spatial Management of Training Environment
SPOT	Satellite Probatoire d'Observation de la Terre
SRP	Site Rehabilitation Prioritization
SUSV	Small Unit Support Vehicle
TA	Training Area
TAPS	Trans-Alaska Pipeline System
TCC	Tanana Chiefs Conference, Inc.

TFTA	Tanana Flats Training Area
TOC	Tactical Operations Center
TRADOC-ATSC	US Army Training and Doctrine Command
TRI	Training Requirements Integration
TSI	Timber Stand Improvement
TSSDS	Tri-Service Spatial Data Standards
UAF	University of Alaska Fairbanks
US	United States
USAF	United States Air Force
USARAK	United States Army Alaska
USARPAC	United States Army Pacific Command
USC	United States Code
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UTM	Universal Transverse Mercator
UXO	Unexploded Ordnance
WES	Waterways Experiment Station
YTA	Yukon Training Area (also referred to as Yukon Maneuver Area)